



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/587,923	09/06/2007	Wilhelm Landwehr	SSM-566US	3606
23122	7590	12/24/2009	EXAMINER	
RATNERPRESTIA			KENNEDY, JOSHUA T	
P.O. BOX 980				
VALLEY FORGE, PA 19482			ART UNIT	PAPER NUMBER
				3679
			MAIL DATE	DELIVERY MODE
			12/24/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/587,923	Applicant(s) LANDWEHR, WILHELM
	Examiner JOSHUA T. KENNEDY	Art Unit 3679

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 30 November 2009.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-6 and 8-54 is/are pending in the application.
 4a) Of the above claim(s) 11,15-31 and 41-53 is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-6, 8-10, 12-14, 32-40 and 53 is/are rejected.
 7) Claim(s) 54 is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 02 August 2006 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
 2) Notice of Draftsman's Patent Drawing Review (PTO-544)
 3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date _____

4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date _____

5) Notice of Informal Patent Application
 6) Other: _____

DETAILED ACTION

Election/Restrictions

Claims 11, 15-31 and 41-53 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 6/8/2009.

Claim 7 has been cancelled.

Claims 1-6, 8-10, 12-14, 32-40, 53, and 54 have been examined.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the sub-assemblies for applying the axial forces being embodied as combinations of cylinders, screw elements, wedge mechanisms and lever mechanisms (Claim 35) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate

changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 34-36 and 53 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claims 34-36, it is not clear as to what cooperating structure the sub-assemblies of the fixing structure are applying axial forces nor is it clear as to how the subassemblies are embodied as combinations of cylinders, screw elements, wedge mechanisms and lever mechanisms connected indirectly or directly to the fixing structure.

Claim 53 recites the limitation "one division" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6, 8-10, 12-14, 33, and 37-40 are rejected under 35 U.S.C. 102(b) as being anticipated by Miller et al (US Patent 4,979,842).

As to Claim 1, MILLER ET AL disclose a shrinkage disc unit assembly, comprising:

- a) a rotational body (2) comprising a circumferential outer surface (Fig 1);
- b) a hub (1) surrounding the rotational body and comprising a circumferential inner surface which together with the circumferential outer surface forms an inclined joint between the rotational body and the hub, wherein the hub can be shrunk onto the rotational body at the joint;
- c) a fluid channel (7) leading through the rotational body or the hub, for charging the joint with a pressurized fluid;
- d) and a fixing structure (Examiner considers the outer face of hub (1) to be the fixing structure) which is formed by one of the rotational body and the hub, alone or in combination with the other, and by means of which a tool (3) is capable of being axially supported either on the rotational body or the hub and fixed only in a predetermined rotational angular position on the rotational body and/or the hub, for assembling and/or disassembling the hub (Examiner considers the predetermined position to be any

Art Unit: 3679

angular position in which the ports (8) of the tool (3) are aligned within the boundaries of the seals (16));

e) wherein the rotational body and/or the hub is or are configured such that it is only possible to press a pressurized fluid into the joint when the tool is mounted at the predetermined rotational angular position on the rotational body and/or the hub (Examiner considers the functional limitation to be met since the fluid will not enter the joint unless the ports (8) of the tool (3) are aligned within the boundaries of the seals (16)).

As to Claim 2, MILLER ET AL disclose the shrinkage disc unit assembly according to claim 1, wherein the joint is conical at least in segments (Fig 1).

As to Claim 3, MILLER ET AL disclose the shrinkage disc unit according to claim 1, wherein a supporting collar is formed on either the rotational body or the hub, in order to support the tool in a positive lock (Examiner considers the shoulder portion, adjacent the protrusion 4 to be a supporting collar on the hub).

As to Claim 4, MILLER ET AL disclose the shrinkage disc unit assembly according to claim 1, wherein a positioning element is formed as a cavity (Examiner considers the recessed shoulders of the hub adjacent the protrusion (4) to be the positioning element) or protrusion on either the rotational body or the hub and is capable of engaging a

positioning element (4) of the tool, formed as a protrusion or cavity, in order to position the tool at the predetermined rotational angular position.

As to Claim 5, MILLER ET AL disclose the shrinkage disc unit assembly according to claim 4, wherein the positioning element is arranged near to a port (8) of the fluid channel of the shrinkage disc unit (Fig 1).

As to Claim 6, MILLER ET AL disclose the shrinkage disc unit assembly according to claim 1, wherein said tool comprises:

a fixing structure (Examiner considers the inner face of tool (3) to be the fixing structure) for positioning the tool on the rotational body or the hub at the predetermined rotational angle position and axially supporting the tool on one of the rotational body and the hub (Fig 1);

a pressure element (16) or tensile element, supported by the fixing structure such that it can be moved, by means of which, when a fixing part is axially supported on one of the rotational body and the hub, the other of the rotational body and the hub can be charged with an axial force (When the pressure element (16) is in place, the pressure forces the hub elements apart with an axial force);

and a fluid channel (10) formed in the tool and, when the tool is fixed, capable of being connected to the fluid channel (7) of the shrinkage disc unit, such that the joint can be charged with the pressurized fluid through the fluid channel of the tool (Fig 1).

As to Claim 8, MILLER ET AL disclose a shrinkage disc unit assembly, comprising:

- a) a conical circumferential outer surface formed by a rotational body (2);
- b) a hub having a conical circumferential inner surface which is pushed onto the circumferential outer surface (1);
- c) a tool (3), separate from the hub and the rotational body, for assembling and/or disassembling the hub relative to the rotational body; wherein:
 - d) the tool is only connected to one of the rotational body and the hub in a non-positive and/or positive lock in a predetermined rotational angular position (Examiner considers the predetermined position to be any angular position in which the ports (8) of the tool (3) are aligned within the boundaries of the seals (16));
 - e) a joint between the conical circumferential outer surface and the conical circumferential inner surface is charged with a pressurized fluid (via 10,7) for assembling and disassembling the hub and rotational body, wherein this can only be achieved when the tool is fastened to said one of the rotational body and the hub in the predetermined rotational angular position (Examiner considers the functional limitation to be met since the fluid will not enter the joint unless the ports (8) of the tool (3) are aligned within the boundaries of the seals (16)).

As to Claim 9, MILLER ET AL disclose the shrinkage disc unit assembly according to claim 1, wherein the tool comprises one or more protruding (4) or retracted portions which engage with a corresponding number of portions of one of the rotational body and the hub, substantially congruent with respect to the portion or portions of the tool, when

fastening the tool, wherein the configuration and arrangement of the portions only allows the tool to be fastened such that the tool is at the predetermined rotational angular position (Fig 1).

As to Claim 10, MILLER ET AL disclose the shrinkage disc unit assembly according to claim 1, wherein the tool is forced to be properly fastened to one of the rotational body and the hub by the configuration of the tool and said one of the rotational body and the hub (Fig 1).

As to Claim 12, MILLER ET AL disclose the shrinkage disc unit assembly according to claim 1, wherein the tool is connected to one of the rotational body and the hub in a positive lock via at least one groove at least partially encircling an outer surface of said one of the rotational body and the hub and at least one portion of the tool engaging the at least one groove in a positive lock (Fig 1).

As to Claim 13, MILLER ET AL disclose the shrinkage disc unit assembly according to claim 1, wherein the tool is connected to said one of the rotational body and the hub in a frictional lock by surface contact (via 16).

As to Claim 14, MILLER ET AL disclose the shrinkage disc unit assembly according to claim 1, wherein:

- a) the joint is charged with pressurized fluid via a supply conduit (7) which is integrated into one of the rotational body and the hub and via a supply conduit which is integrated into the tool (10);
- b) and wherein there is a connection between the supply conduits when the tool is properly fastened to said one of the rotational body and the hub (Fig 1).

As to Claim 32, MILLER ET AL disclose the shrinkage disc unit assembly according to claim 1, wherein when the shrinkage disc unit is assembled, the hub is secured against axially shifting along the centre axis of the rotational body in a positive lock on the rotational body via a number of securing elements, wherein the securing elements are secured in their position on one of the rotational body and the hub in a non-positive lock or/and a positive lock (Examiner considers the shoulders on the rotational body (2) to be the securing elements).

As to Claim 33, MILLER ET AL disclose the shrinkage disc unit assembly according to claim 1, wherein the rotational body includes a shaft (13) and a tensioning sleeve (2) and the tensioning sleeve is prevented from axially shifting along the centre axis of the shaft by the configuration of the tensioning sleeve and the shaft (via the shoulders on the shaft (13) and the cover (12)).

As to Claim 37, MILLER ET AL disclose the shrinkage disc unit assembly according to claim 1, wherein the circumferential outer surface and the circumferential inner surface comprise a number of congruent portions (Fig 1).

As to Claim 38, MILLER ET AL disclose the shrinkage disc unit assembly according to claim 1, wherein the joint is circumferentially conical (Fig 1).

As to Claim 39, MILLER ET AL disclose the shrinkage disc unit assembly according to claim 5, wherein the positioning element is arranged in a rotational angular position relative to the rotational axis which is 30° at most away from the port of the fluid channel (Fig 1).

As to Claim 40, MILLER ET AL disclose the shrinkage disc unit assembly according to claim 8, wherein the rotational body is a tensioning sleeve (Fig 1).

Claims 1, 4, 5, 34, 35, and 53 are rejected under 35 U.S.C. 102(b) as being anticipated by Mullenberg (US Patent 5,476,337)

As to Claim 1, Mullenberg discloses a shrinkage disc unit assembly, comprising:
a) a rotational body (20) comprising a circumferential outer surface (23);

- b) a hub (30) surrounding the rotational body and comprising a circumferential inner surface (21) which together with the circumferential outer surface forms an inclined joint between the rotational body and the hub, wherein the hub can be shrunk onto the rotational body at the joint (Fig 1);
- c) a fluid channel (26,27) leading through the rotational body or the hub, for charging the joint with a pressurized fluid;
- d) and a fixing structure (Examiner considers the threaded bore of the hub (30) to be the fixing structure) which is formed by one of the rotational body and the hub, alone or in combination with the other, and by means of which a tool (4) is capable of being axially supported (via screw 32) either on the rotational body or the hub and fixed only in a predetermined rotational angular position on the rotational body and/or the hub, for assembling and/or disassembling the hub (Examiner considers the predetermined position to be any angular position in which the threaded bore of the hub (30) aligns with a bore of the tool (4) having a screw extending therefrom);
- e) wherein the rotational body and/or the hub is or are configured such that it is only possible to press a pressurized fluid into the joint when the tool is mounted at the predetermined rotational angular position on the rotational body and/or the hub (Examiner considers the functional limitation to be met since the fluid will be contained within the joint unless the bores are aligned and all three parts (30, 20 and 4) are assembled together).

As to Claim 4, Mullenberg discloses the shrinkage disc unit assembly according to claim 1, wherein a positioning element is formed as a cavity (defined by 6, 20 and 30) or protrusion on either the rotational body or the hub and is capable of engaging a positioning element (10) of the tool, formed as a protrusion or cavity, in order to position the tool at the predetermined rotational angular position.

As to Claim 5, Mullenberg discloses the shrinkage disc unit assembly according to claim 4, wherein the positioning element is arranged near to a port (26) of the fluid channel of the shrinkage disc unit (Fig 1).

As to Claim 34, as best understood Mullenberg discloses the shrinkage disc unit assembly according to claim 5, wherein the fixing structure is an annular body (5; Fig 1) and bears a number of sub-assemblies (32) which apply axial forces for assembling the hub and rotational body, and wherein the fixing structure is embodied in one or more parts (Fig 1).

As to Claim 35, as best understood Mullenberg discloses the shrinkage disc unit assembly according to claim 34, wherein the sub-assemblies for applying the axial forces are embodied as fluid-operated duty cylinders or as screw elements (32) or as wedge mechanisms or as lever mechanisms or as combinations of these, and wherein these sub-assemblies are connected indirectly or directly to the fixing structure (Fig 1).

As to Claim 53, as best understood Mullenberg discloses the shrinkage disc unit assembly according to claim 34, wherein the at least one division is embodied radially with respect to the longitudinal axis of the fixing structure (Fig 1).

Allowable Subject Matter

Claims 36 and 54 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The primary reason for the indication of allowable subject matter in the claims is the inclusion of the limitation of "the sub-assemblies for applying the axial forces are embodied as hydraulic cylinders which consist substantially of cylindrical bores comprising a pressure port and of pistons" (Claim 36, Lines 2-3) which is not found in the prior art references. The closest prior art of record, Miller et al, Mullenberg and Bunyan taken as a whole, disclose a fence system significantly as claimed, but does not provide any teaching, suggestion, or motivation to modify the prior art as such. There is no cogent reasoning that is unequivocally independent of hindsight that would have led one of ordinary skill in the art at the time the invention was made to modify the prior art to obtain the applicant's invention.

Response to Arguments

Applicant's arguments filed 11/30/2009 have been fully considered but they are not persuasive.

Applicant argues:

"Miller et al. does not teach or suggest a tool fixed only in a predetermined rotational angular position wherein the rotational body and/or the hub is or are configured such that it is only possible to press a pressurized fluid into the joint when the tool is mounted at the predetermined rotational angular position." (Page 13)

Examiner respectfully disagrees. As advanced in the rejection above, Examiner considers the "predetermined rotational angular position" to be any angular position in which the ports (8) of the tool (3) are aligned within the boundaries of the seals (16) which meets the instant claim language. In this regard, it is pointed out that it is the language of the claims that is to be considered and Examiner notes that there is nothing in the instant claim language that precludes the Examiner from making such an interpretation. Thus, it has been shown that the language of the claim in this respect "reads on" Miller et al.

Conclusion

Applicant's amendment, specifically the positive inclusion of the tool as a part of the shrinkage disc unit "assembly" (Claim 1, Line 1 and Applicants arguments regarding the previous Section 112 rejection on Page 11), necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**.

See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOSHUA T. KENNEDY whose telephone number is (571)272-8297. The examiner can normally be reached on M-F: 7:30am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on (571) 272-7087. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Joshua T. Kennedy/
Examiner, Art Unit 3679
12/16/2009

/Daniel P. Stodola/
Supervisory Patent Examiner, Art Unit 3679